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The JOURNAL of GEOGRAPHY

VOLUME XLIV APRIL, 1945 NUMBER 4

In This Issue

President's Report. The National Council of Geography Teachers . *Floyd F. Cunningham*

Activities of the National Council of Geography Teachers . . . . *Thomas F. Barton*

A Practical Approach to Postwar Geography . . . . . *H. Thompson Straw*

Some Problems of Map Publishers Related to World War II . . . . . *D. E. Sites*

Some Experiences in Teaching Sixteen Hundred Cadets of the United States Army Air Force . . . . . *J. R. Schwendeman*

Community Vision Thru Geography . . . . . *J. Granville Jensen*

Interest-Stimulating Device . *W. O. Blanchard*

Editorial Notes and News . . . . . .

Geographical Publications . . . . . .

Published by A. J. NYSTROM & CO., for THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
GEORGE J. MILLER, *Editor*

The JOURNAL *of* GEOGRAPHY

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The subscription price is $2.75 a year, payable in advance. The price of single copies is 35 cents. Postage prepaid on subscriptions from the United States, Canada, Canal Zone, Republic of Panama, Puerto Rico, Cuba, Virgin Islands of the United States, Dominican Republic, Philippines, Guam, Samoan Islands, Hawaii, Mexico, Costa Rica, Guatemala, Nicaragua, Republic of Honduras, Salvador, Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, Uruguay, Spain and Spanish Colonies. All other countries in the Postal Union add for postage 27¢ on annual subscriptions (total $3.02), on single copies 3¢ (total 38¢). All subscriptions are payable in United States Dollars.

***The Journal* is the official organ of the National Council of Geography Teachers and is sent to all members of the organization. The annual dues, $2.50, are payable to the *Journal of Geography*.** Extra postage rates for copies sent to foreign countries should be added to the membership dues.

Patrons are requested to make all remittances payable to the *Journal of Geography*, in postal or express money orders or bank drafts.

Members and subscribers who wish to continue receiving the *Journal* must send remittances promptly to assure the volume being complete.

Send manuscript and books for notice or review to the *Editor*.
Send orders for back numbers to *Journal of Geography*.

Published monthly except June, July and August

PUBLICATION OFFICES: 450-454 AHNAIP STREET, MENASHA, WISCONSIN

Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO

Entered as second-class matter January 15, 1919 at the post office of Menasha, Wisconsin, under the Act of March 3, 1879.

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR APRIL, 1945

President's Report. The National Council of Geography Teachers. By Floyd F. Cunningham 129

Dr. Cunningham, State Teachers College, Florence, Alabama, is retiring President of the National Council.

Activities of the National Council of Geography Teachers. By Thomas F. Barton 132

Dr. Barton, Southern Illinois Normal University, Carbondale, Illinois, is Secretary of the National Council.

A Practical Approach to Postwar Geography. By H. Thompson Straw 137

Dr. Straw is a Professor of Geography at Western Michigan College at Kalamazoo, Michigan, and is now on leave of absence while in the army. He is at present Chief of the Cartographic Section of the Historical Branch G-2, Washington, D.C.

Some Problems of Map Publishers Related to World War II. By D. E. Sites 145

Mr. Sites is a former teacher of geography and is now a map expert for Rand McNally and Company. He is author of a booklet entitled "Teaching a True Concept of the World."

Some Experiences in Teaching Sixteen Hundred Cadets of the United States Army Air Force. By J. R. Schwendeman 152

Dr. Schwendeman is head of the Department of Geography, University of Kentucky and a frequent contributor to scientific research and to educational geography.

Community Vision Thru Geography. By J. Granville Jensen 162

Mr. Jensen is Professor of Geography, Rhode Island College of Education and Editor of *Geography-Science Bulletin*. He is a frequent contributor to educational journals.

Interest-Stimulating Device. Asia, Some Unusual Features. By W. O. Blanchard 167

Dr. Blanchard of the University of Illinois, is well known to JOURNAL readers and also to teachers thruout the country who have used his texts. As a side line, Dr. Blanchard has gotten a lot of pleasure out of the formulation of interest-stimulating devices. Both teachers and students will find it eminently worth while to answer the questions which he has raised. It is not our intent to publish a set of answers.

Editorial Notes and News 168

Geographical Publications 169

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals*.
Authors alone are responsible for opinions and statements in the JOURNAL.

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VOLUME XLIV APRIL, 1945 NUMBER 4

THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

PRESIDENT'S REPORT

by

FLOYD F. CUNNINGHAM

INTRODUCTION

After returning from the New York meeting of the National Council of Geography Teachers where I was elected President of the Council, I immediately set about to secure desirable appointees to the various new committees which had just been authorized. The war made the task an extremely difficult one.

Thruout the three years I have kept in constant touch with the work of the more important committees as well as that of the Secretary thru a voluminous amount of correspondence. At all times I have endeavored to expedite the work of committees.

Furthermore, I have carried on much correspondence with individuals and organizations relative to geographic education. During the three year period I made over one hundred addresses on geography (chiefly military geography) to schools, colleges, civic clubs, and to other organizations.

The only change in committee personnel not noted elsewhere in this report is as follows: On June 6, 1944 Edith Parker was relieved of the duties of chairman of the Research Committee. J. Russell Whitaker next in line on the committee was made chairman.

The failure to mention the work of many committees is not to be construed that these committees were inactive. Each has no doubt made annual reports to the Secretary.

NEW COMMITTEES AUTHORIZED AT THE NEW YORK MEETING OF THE NATIONAL COUNCIL

At the New York meeting of the National Council of Geography Teachers the following new committees were authorized:

1. Curriculum Committee
2. Membership Committee
3. Public Relations Committee

1. Curriculum Committee

After encountering one difficulty after another in selecting the personnel, the following committee members began work on the program of preparing syllabi: Henry F. Becker, Florida State College for Women, chairman, Tallahassee, Florida; H. O. Lathrop, Illinois State Normal University, Normal, Illinois; J. Russell Whitaker, George Peabody

College for Teachers, Nashville, Tennessee; Clare Symonds, Quincy High School, Quincy, Illinois; Elizabeth Lichton, Carl Schurz High School, Chicago; Luella Nolen Dambaugh, University of Pittsburgh, Pa.; and recently Frances Hanson, University of Pittsburgh, was added to the committee. Professor Whitaker is no longer a member of the committee having resigned because of the pressure of other duties.

As President I have kept in constant contact with the work of this committee by correspondence with Mr. Becker. The committee submitted several preliminary reports and in November, 1944 it submitted a preliminary edition of the syllabus for the World Geography Course for secondary schools.*

2. Membership Committee

Those appointed to serve on the Membership Committee were Katheryne Thomas Whittemore, chairman, State Teachers College, Buffalo, New York; H. Harrison Russell, State Teachers College, Bloomsburg, Pennsylvania; and J. E. Switzer, Indiana University, Bloomington; and Elizabeth Gregory was later added to the committee. The committee was assigned the task of studying the general matter of membership and was committed to furnishing a detailed report.

3. Public Relations Committee

Altho authorized to appoint Public Relations Committee, I appointed a director of public relations, a one-man committee. It appeared to me that the work of such a committee could be more advantageously handled by one person rather than by two or three. David J. Swartz of the Haaren High School, New York City, was appointed Director. Mr. Swartz has done excellent work as is evidenced by the numerous reports which he issued from time to time. I recommend that we increase our efforts to have the public better informed about the work of the Council.

NEW COMMITTEES (UNAUTHORIZED)

From time to time unforeseen conditions have arisen where the creation of new committees seem justified.

The following new committees have been created:

1. World Calendar Committee
2. Meteorological Equipment Standards Committee
3. Committee for the Evaluation of Army and Navy Programs in Geography

1. World Calendar Committee

In May 1944 a request was received from the World Calendar Association asking that the National Council of Geography Teachers study the proposed World Calendar with a view of approval.

A committee made up of the following members studied the proposed calendar: H. Thompson Straw, 1st Lieut., A.C., The War Department, Washington, D.C.; Harry L. Law, Austin Peay State College, Clarksville, Tennessee; and Catherine L. Braun, State Teachers College, Morehead, Kentucky.

The committee sent resolutions of approval to the members of the Executive Committee, and since there were no dissenting votes, I have asked Lieut. Straw to report to the World Calendar Association that the proposed calendar has the approval of the National Council of Geography Teachers.

2. Meteorological Equipment Standards Committee

Since much interest was being manifested in meteorology it appeared desirable to appoint a committee to be designated as the Meterological Equipment Standards Committee. Thomas F. Barton, Southern Illinois State Normal University, Carbondale,

* Published in the JOURNAL OF GEOGRAPHY, February and March.

accepted the chairmanship. No other members were appointed to serve with Mr. Barton altho an attempt was made. I recommend that the President-Elect consider the matter carefully and use his judgment relative to completing the personnel of this committee.

3. Committee for the Evaluation of Army and Navy Programs in Geography

The National Council has had a few requests from educators asking for our evaluation of the Army and Navy programs relating to geography. Benjamin Moulton who has been teaching geography at Butler University, but now at Indiana University, was asked to serve as chairman of this committee inasmuch as he had already made considerable study relating to the Army and Navy programs. Mr. Moulton declined the appointment since he is now busy working on his doctorate.

No further appointments were attempted as Mr. Moulton's reply did not arrive until December 5, 1944. President Elect White should create such a committee if he thinks the new committee justifiable.

THE COMMITTEE ON STANDARDS OF CERTIFICATION FOR THE TEACHING OF GEOGRAPHY IN HIGH SCHOOL

The Committee on Standards of Certification for the Teaching of Geography in High Schools appointed by Miss Cora P. Sletten has been very active under the chairmanship of Alfred H. Meyer of the Department of Geography and Geology of Valparaiso University. Thruout my three years as President I have been in constant touch with the work of the committee.

The committee has made several reports. A detailed report published as Professional Paper No. 6 has been enthusiastically received all over the nation.

During the year of 1942 Dr. Howard E. Wilson of Harvard University resigned from the committee. Dr. Paul Hanna of the School of Education, Stanford University was appointed to fill the vacancy.

COOPERATION WITH THE N.E.A.

The Denver Meeting

At the Denver meeting of the N.E.A., July, 1942, Anne M. Goebel, State Teachers College, Emporia, Kansas, was appointed to take charge of the Geography Section of the N.E.A. Miss Goebel served temporarily for Mrs. Erna G. Gilland, Chairman of the Educational Relations Committee.

The Pittsburgh Meeting

Linnie B. James of the Forest Hills Junior High School, Pittsburgh, and Luella Nolen Dambaugh of the University of Pittsburgh were appointed to assume the responsibility of preparing a program for the Geography Section of the N.E.A. meeting in July, 1944, at Pittsburgh.

COOPERATION WITH THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE

The National Council of Geography Teachers sent official delegates to the Annual Meeting of the American Academy of Political and Social Science in 1942 and 1943. Official appointees in 1942 were Frank E. Williams, University of Pennsylvania; Harriet A. Elliott, Teachers College, West Chester, Pennsylvania; and Adelbert K. Botts, State Teachers College, Trenton, New Jersey.

In 1943 Frank E. Williams again officially represented the National Council at the Annual Meeting of the Academy. Our organization did not send an official delegate to the 1944 meeting.

On December 31 when the clocks tolled the hour of midnight I joined the ranks

of post officers and handed over to my successors the administrative affairs of the National Council. To all officers and to all committeemen may I thank you for your loyalty and cooperation. You have helped to make my task an easier one. To the incoming officers and committeemen I extend best wishes for success in 1945 and for the years to follow, and may the future be free from the horrors of war and its associated evils.

FLOYD F. CUNNINGHAM
Retiring President

State Teachers College
Florence, Alabama

ACTIVITIES OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

THOMAS F. BARTON

ELECTION OF OFFICERS

President Floyd F. Cunningham appointed a nominating committee consisting of Miss Edna E. Eisen, Kent State University, Chairman; Professor J. R. Whitaker, George Peabody College for Teachers; and Professor J. E. Switzer, University of Indiana. This committee nominated the following officers:

President—Dr. C. Langdon White, Stanford University, California
First Vice-President—Mrs. Katheryne Thomas Whittemore, State Teachers College, Buffalo, New York
Second Vice-President—Dr. A. H. Meyer, Valparaiso University, Valparaiso, Indiana
Secretary—Dr. Thomas F. Barton, Southern Illinois Normal University, Carbondale, Illinois
Treasurer—Dr. George H. Primmer, State Teachers College, Duluth, Minnesota.
Executive Committee—Dr. Floyd F. Cunningham, State Teachers College, Florence, Alabama

Your secretary submitted this slate of officers to the members of the Executive Committee. The officers were elected unanimously except that no one voted for himself.

These new officers started their administrative duties on January 1, 1945.

COMMITTEE MEMBERSHIP

In November, 1944, I sent the following message to Executive Committee members. "Because we have not been able to hold our annual meetings and elections, our standing committees have remained the same. Would you, as a member of the Executive Committee, approve the plan of permitting the committee members whose terms were to expire in 1942 to expire this year, 1944?" All members voted for the plan except one who suggested "that we leave the committee members as they are until we hold an annual meeting." Consequently, the plan has been approved and Dr. Edwin H. Reeder, Dr. Henry Becker, and Dr. H. O. Lathrop retired from the Executive Committee in 1944. Dr. Floyd F. Cunningham, Dr. Otis Freeman, and Dr. J. R. Whitaker have been elected by the 1944 Executive Committee members to serve on their committee during the three year period of 1945-1947.

Dr. S. S. Visher retires from the Distinguished Service Award Committee and Dr.

Helen Strong, Washington, D.C., heads this important committee in 1945. The 1944 Executive Committee elected Miss Mary Jo Read to the Distinguished Service Award Committee and she will serve until 1949.

The 1944 Executive Committee also elected Dr. Edwin H. Reeder to the Research Committee. His term will expire in 1948.

PARTICIPATION IN JOINT SESSION OF N.C.G.T. AND N.C.S.S.

Professor Guy-Harold Smith served as president and M. Melvina Svec as secretary of the first joint session of the National Council of Geography Teachers and the National Council of Social Studies at the Twenty-fourth annual meeting of the latter organization. Dr. J. R. Whitaker served as president and Edna Eisen as secretary of the second session. This meeting was held in Cleveland on November 23-25, 1944. The theme of the day's program was "Geography in the Program of Social Studies." Miss Svec reports that there were more than 75 persons at the morning session and more than 95 at the afternoon meeting. The geographers at this meeting agreed that it is essential for the National Council of Geography Teachers to hold an annual meeting in 1945.

ANNUAL MEETING

Our organization has not held an annual meeting since December, 1941. The 1942 meeting was postponed less than three weeks before it was to be held. No annual meeting was attempted in 1943. After a program for the 1944 annual meeting was prepared by President Cunningham, we received a patriotic appeal from the Office of Defense Transportation urging people to cancel all meetings not of immediate importance. Your president and secretary responded to this plea in the affirmative as did the officers of the Association of American Geographers. We cancelled our meeting scheduled for September 10-12, 1944, in Cleveland. In retrospect, President Cunningham and I feel that the O.D.T. let us down.

Most of the geographers I hear from in the Mississippi valley believe there absolutely should be an annual meeting in 1945. However, some geographers along the Atlantic seaboard feel we should not hold a meeting until the war is over. Because of this situation, your secretary believes it would be best to hold the 1945 meeting in the upper Mississippi valley. Then, once the date is set, that meeting should not be postponed again. "Starting and stopping" is expensive, hard on the organization, and difficult for the officers.

Your president and secretary eagerly welcome suggestions on two questions: When should our next annual meeting be held? With what other organization would you like it to run concurrently? Some organizations suggested by geographers are the National Council for the Social Studies, the National Educational Association, the National Association of School Administrators, the American Association for the Advancement of Science, and the Association of American Geographers. Will you please write us about this matter?

FOURTH GRADE GEOGRAPHY TEST

Last summer I mailed mimeographed letters to approximately 175 N.C.G.T. members requesting that they help in giving the Fourth Grade Geography Test so that it might be standardized. McKnight and McKnight report that just a dozen colleges in ten different states ordered 800 tests in the fall. I hope for and expect a much bigger showing in the spring. If college personnel giving these tests will send the scores to Dr. Uttley, there is no reason why the test could not be standardized this summer. Moreover, with a favorable result, I'm sure the Committee on Tests will be encouraged to speed up the preparation of a Fifth Grade Geography Test.

RESEARCH IN GEOGRAPHIC EDUCATION

At the Executive Committee Session in New York, December, 1941, Dr. Thralls reported that Miss Zink's work on "Recent Research in Geographic Education" would be completed before February 1, 1942, and submitted to the Committee to Investigate the Possibilities for Its Publication. The manuscript was submitted to several people in 1944, but has not yet been submitted to a publisher.

I have urged that the manuscript be examined by some publishing house so as to get an opinion as to the desirability and expenses of publication. If the National Council of Geography Teachers is requested to underwrite the publication of the manuscript, the officers should have available a careful and thoro estimation of cost.

Dr. Thralls assured me in a letter last October that Miss Zink would have the manuscript ready for a publisher before the end of the year. She would then submit it to McKnight and McKnight for an estimated cost of publication.

EXECUTIVE COMMITTEE MEMBERS

Term to Expire in 1945

Miss Cora Sletten, State Teachers College, Mankato, Minnesota.
Dr. Earl B. Shaw, State Teachers College, Worcester, Massachusetts.
Mrs. Katheryne Thomas Whittemore, State Teachers College, Buffalo 9, New York.

Term to Expire in 1946

Miss Alice Foster, Rosenwald Hall, University of Chicago, Chicago, Illinois.
Dr. A. H. Meyer, Valparaiso University, Valparaiso, Indiana.
Major James A. Tower, Air Corps, 1500 Standard Oil Building, Baltimore, Maryland.

Term to Expire in 1947

Dr. Floyd F. Cunningham, State Teachers College, Florence, Alabama.
Dr. J. R. Whitaker, George Peabody College for Teachers, Nashville, Tennessee.
Dr. Otis Freeman, University of Indiana, Bloomington, Indiana.

OFFICERS

Dr. C. Langdon White, Stanford University, Stanford, California.
Dr. Thomas F. Barton, Southern Illinois Normal University, Carbondale, Illinois.

ANNUAL REPORT OF THE TREASURER

NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
DECEMBER 16, 1943

GENERAL TREASURY REPORT
(Money other than research fund)

Dec. 16, 1942	Amount in general treasury	$ 435.39
Mar. 13, 1942	A. J. Nystrom (On deposit but not in 1942 report)	35.00
Sept. 30, 1942	A. J. Nystrom (On deposit but not in 1942 report)	21.25
1941	Interest allowed by St. Louis County State Bank (now reported)	1.37
		$ 493.01

Funds received December 16, 1942-December 15, 1943			
Jan. 1, 1943	Interest allotted to general fund	$ 2.23	
July 1, 1943	Interest allotted to general fund	2.19	4.42
Mar. 6, 1943	A. J. Nystrom; 165 subs. J. of G. @ 25¢	$ 41.25	
June 9, 1943	A. J. Nystrom; 149 subs. J. of G. @ 25¢	37.25	
Sept. 1, 1943	A. J. Nystrom; 97 subs. J. of G. @ 25¢	24.25	
Dec. 8, 1943	A. J. Nystrom; 284 subs. J. of G. @ 25¢	71.00	173.75
			$ 671.18
Funds expended December 16, 1942-December 15, 1943			
Mar. 1, 1943	W. M. Welch Co., D.S. Award (E.H.)	$ 1.69	
Mar. 1, 1943	Carbondale Herald (2,000 letterheads—G.J.M.)	10.25	
Mar. 16, 1943	To reimburse auditor for express	.41	
April 8, 1943	Carbondale Herald (2,000 letterheads & postage)	11.09	
Sept. 14, 1943	Mankato F.P.Co. (10,000 letterheads—G.J.M.)	38.50	61.94
			$ 609.24
	Check No. 21 (March 16, 1943) yet outstanding		.41
Amount in general treasury, December 16, 1943			$ 609.65

RESEARCH FUND REPORT

Dec. 16, 1942	Total amount in research fund treasury		$4,160.24
Funds received December 16, 1942-December 15, 1943			
Jan. 1, 1943	Interest allotted to research fund	$ 20.11	
July 1, 1943	Interested allotted to research fund	19.76	39.87
Mar. 6, 1943	Jno. Wiley (Royalty; Conservation)	$ 73.95	
Aug. 8, 1943	Jno. Wiley (Royalty; Conservation)	94.65	
Jan. 9, 1943	McKnight & McKnight (Royalty; Ge. Ed. S.)	27.92	196.52
			$4,396.63
Funds expended December 16, 1942-December 15, 1943			
Feb. 2, 1943	A. H. Meyer (Expenses of St. of C. Com.)	$ 23.68	
Apr. 20, 1943	A. H. Meyer (Expenses of St. of C. Com.)	51.27	
Apr. 20, 1943	A. H. Meyer (Expenses of St. of C. Com.)	175.63	
June 4, 1943	A. H. Meyer (Expenses of St. of C. Com.)	67.99	
Aug. 9, 1943	A. H. Meyer (Expenses of St. of C. Com.)	41.48	
Mar. 12, 1943	A. H. Meyer (Expenses of St. of C. Com.)	49.93	409.98
Total amount in research fund December 16, 1943			$3,986.6
Total amount in general treasury fund December 16, 1943			609.65
Total amount in General Treasury & in Research Fund, Dec. 16, 1943			$4,596.30
Dec. 16, 1943	In checking account Duluth National Bank		$ 168.06
Dec. 16, 1943	In interest account Duluth National Bank		4,428.24
Dec. 16, 1943	Total NCGT funds on deposit Duluth National Bank.		$4,596.30

GEO. H. PRIMMER, *Treasurer*
Geographer, AAF
817 S. Ode St.
Arlington, Va.

NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
DECEMBER 3, 1944

GENERAL TREASURY REPORT
(Money other than research fund)

Dec. 16, 1943	Amount in general treasury		$ 609.65
Funds received December 16, 1943-December 3, 1944			
Jan. 1, 1944	Interest allotted to general fund	$ 2.22	
July 1, 1944	Interest allotted to general fund	2.23	
Mar. 14, 1944	A. J. Nystrom; 224 subs. J. of G. @ 25¢	61.00	
May 15, 1944	Jour. of Geog. (G.J.M.) Letterheads	8.25	
June 30, 1944	A. J. Nystrom; 112 subs. J. of G. @ 25¢	28.00	
Sept. 23, 1944	A. J. Nystrom; 124 subs. J. of G. @ 25¢	31.00	132.70
			$ 742.35
Funds expended December 16, 1943-December 3, 1944			
May 1, 1944	W. M. Welch Co., D.S.A. (W.W.A.)	$ 1.70	
May 15, 1944	Mankato F. Press; 3,000 letterheads	19.50	
June 24, 1944	W. W. Welch Co., Dist. Service Award	1.77	
Aug. 19, 1944	T. F. Barton; honorarium and mis. expenses	55.45	
Oct. 30, 1944	J. of G., Geo. J. Miller, 1000 letterheads	4.25	82.67
Total amount in general treasury December 4, 1944			$ 659.68

RESEARCH FUND REPORT

Dec. 16, 1943	Amount in research fund		$3,986.65
Funds received December 16, 1943-December 3, 1944			
Jan. 1, 1944	Interest allotted to research fund	$ 20.03	
July 1, 1944	Interest allotted to research fund	20.13	
Jan. 23, 1944	McKnight & McKnight, 10% royalty on $431.07	43.10	
Mar. 1, 1944	Jno. Wiley, 336 copies text on conservation	101.52	
Aug. 21, 1944	Jno. Wiley, 274 copies text on conservation	84.75	269.53
			$4,256.18
Funds expended December 16, 1943-December 3, 1944			
Feb. 6, 1944	A. H. Meyer, Expenses St. of Cert. Committee	$ 136.49	
May 7, 1944	A. H. Meyer, Expenses St. of Cert. Committee	105.35	
July 16, 1944	A. H. Meyer, Expenses St. of Cert. Committee	24.12	265.96
Amount remaining in research fund treasury December 4, 1944			$3,990.22
Amount remaining in general treasury December 4, 1944			659.68
Total amount in General Treasury and in Research Fund Dec. 4, 1944			$4,649.90
Dec. 4, 1944	In checking account Duluth National Bank	$ 177.05	
Dec. 4, 1944	In interest account Duluth National Bank	4,472.85	
Dec. 4, 1944	Total NCGT funds on deposit in Duluth National Bank		$4,649.90

GEO. H. PRIMMER, *Treasurer*
Geographer, AAF
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Arlington, Va.

A PRACTICAL APPROACH TO POSTWAR GEOGRAPHY*

H. THOMPSON STRAW
Western Michigan College, Kalamazoo, Mich.

In terms of general interest the war years have seen geography come of age. Our newspapers are filled with place names we have never heard before and with maps which show us their location. There is scarcely a campaign in which surface and weather have not played an important part. The Allies in Italy found two major obstacles to their advance. They were opposed by not only the German forces but the mountainous terrain as well. In Normandy it was the weather which first delayed our landings and then threatened our beachhead. Geographic factors have been of importance in the geopolitical plans of our foes and also in our own problems of strategy, tactics, and logistics. Because such factors are of growing significance and because they have received such widespread discussion in newspapers, magazines, and radio the general interest in geography in the United States has increased greatly.

RELATION OF INCREASED INTEREST IN GEOGRAPHY TO INSTRUCTION

All of this interest in geography is reflected in an increase in the amount of instruction offered in the subject, and since this interest bids fair to continue in the postwar era, because of the problems which the world must attempt to solve then, it is natural to expect that more and more attention will be given to the subject in our schools. At present perhaps the most obvious addition in geography is in the American colleges as a result of the various training programs of the armed forces which are being given. Here, where so many soldiers, sailors, and marines receive instruction, geography and maps have ceased to be things which could be conveniently left behind in the seventh grade and have become of vital interest. A map to a future artillery man is a means of getting a range on his target; to an infantry man it gives detail of an enemy position and information how best to approach it; to the navigator of a bomber it is the means of directing his crew to their target and then getting them safely home. The result of these programs, coupled with the general interest already noted, is that geography has been introduced into many colleges where it never before had

* Prepared for presentation at the meeting of the National Council of Geography Teachers, Cleveland, Ohio, Sept., 1944. The meeting was cancelled on request of the Federal Government. Available papers are appearing in the JOURNAL.—Editor

been taught. A similar service has been rendered the secondary schools, where for many years geography has been sadly neglected, by the introduction of pre-induction courses. As a result of all this the elementary schools have been able to revitalize their offering in geography since the subject no longer begins and ends with the grades. As early as 1942 *The New York Times*[1] noted the increase in the amount of geography offered at the various levels, and since then the increase has continued. Perhaps one of the most encouraging signs is the numerous pleas for more attention to the subject in the American school systems made, not by professional geographers, but by nongeographers.[2] Those of us whose business it is to study geography have long been conscious of its value in the educational system, but to have others who are in no way directly concerned with the subject plead its cause, especially in the secondary schools where it is so much needed, is indeed heartening.

Since this growing interest in our subject means an unprecedented number of opportunities for all instructors in geography it behooves us to consider the responsibilities which attend these opportunities. It may seem prosaic and dull thus to link opportunity and responsibility, but it is also inevitable. Geographers have in the past had opportunities which they have either lost or retained largely as they have been able to measure up to the situation. Where they have failed to make a sufficiently worthwhile contribution or have failed to convince those vitally interested that they were capable of making such a contribution, they have been supplanted by those in other disciplines. Where they have succeeded, geographers have retained their opportunities. And the failure or the success of the geographer has not been an individual matter but has affected to some measure the whole group as well.

Importance of the Practical Approach to Geography

One of the best ways to assure success in these new opportunities is to emphasize those aspects of our subject which will be of most value in the educational program. Education in the next few years promises to place great stress on the practical, not only in the narrow vocational sense but also in the broader sense, for as a

[1] War Spurs Geography Study, *The New York Times*, December 27, 1942, p. E 9.

[2] Some examples are: Stephen Leacock, A Plea for Geographical Science, *Queen's Quart.*, Vol. 50, 1943, pp. 1-13; Eugene Lyons, The New Geography, *Amer. Merc.*, Vol. 54, 1942, pp. 161-162; D. Stiles, Why Not Teach Geography?, *Harpers Mag.*, Vol. 186, 1943, pp. 626-632.

nation we have learned that we must strive to understand the world of which we are a part. Probably never again will the majority of citizens be sure that because an event occurs 5,000 or 10,000 miles away it merits no attention.

The practical approach is a promising one for geography not only because it will enable the subject to fit best the educational trends but also because the practical approach is most likely to appeal to the returning veteran. It does not matter whether individually we plan to teach in college, where returning soldiers will be found in large numbers, or in elementary schools, where few or none of them will be found. When ten million young men develop any common attitudes these attitudes will color the viewpoint of the whole population. Those returned soldiers who are already back upon our campuses have clearly demonstrated a practical attitude toward their studies,[3] and it is interesting to note that this trend follows those associated with the earlier Revolutionary and Civil wars and with World War I.[4] Altho wars often tend to discourage rational and dispassionate inquiry, they give a strong utilitarian character to intellectual activities.

In the face of this movement toward the practical there are two approaches which have been used in geography in the past which are not likely to prove productive. The first, for want of a better term, might be called the romantic approach. It is an attempt to emphasize the travelogue aspect of our subject, to stress the unusual and the unique. The equatorial regions have been described as areas of beautiful forests filled with exotic plants and little-known animals. The natives are perhaps childish but charming in their simplicity. In the midlatitudes beauty of locale and quaintness of custom and dress are given prominence. But the G.I. has seen these parts of the globe, and his experiences will not tally with the descriptions. The beauty of the jungle, which he will persist in calling it, was somewhat obscured by the dank odor of rotting vegetation. The exotic quality of life form went unnoted because of the discomfiture of stinging insects, and the charm of the natives was often less noticeable than the odor of rancid coconut oil with which they smeared their bodies. In Europe he was conscious not so much of the beauty and the quaintness but of the attitudes which he

[3] Benjamin Fine, Veterans, Returning to College with Serious Aim, Take Practical View of Their Studies, *The New York Times*, June 4, 1944, p. E 9.

[4] Merle Curti, The American Scholar in Three Wars, *Journ. Hist. of Ideas*, Vol. 3, 1942, pp. 241-264.

little understood but felt were uncoöperative. So the romantic approach will not aid him in understanding what he has seen. It will be hard to explain Japan in terms of tea ceremonies and flower arrangements to a veteran who has fought in the Pacific.

The second approach, equally nonproductive but less frequently used than the romantic, is the technical one. It seems to be employed most often by those instructors whose training is recent. Many of them are sincere in believing that since other sciences have technical terms which are usually meaningless to the layman, the more terms used in geography the better will its standing become. Thus they speak of the Cfa (Köppen classification) climate and the podsols of strassendorf village patterns and the umlands of cities. It is certainly not the use of these terms which is to be deplored, it is using them as a substitute for the real contribution which geography can make. At times there seem to be no adequate words to replace technical terms, but the instructor needs to remember that "the meaningful jargons of specialists, so valuable in their own field, can never become the common voice of humanity."[5] Most of our students do not come to us in order to specialize in the subject, but because they are in need of the general information we can give them.

Included in the group of those employing the technical approach are those who, altho they may be sparing of their use of geographic terms, conduct classes solely for the presentation of factual material. Any area under consideration has a certain climate, surface, and soil, with a certain acreage devoted to specified crops, with other land uses being present or absent as the case may be. In these classes fact follows fact like one matched bead might follow another on an interminable string. Again, as in the use of technical terms, it is not the use but the misuse of facts which is to be criticized. Geography has a more important function than to become merely encyclopedic. Between a series of facts which never reach any valuable conclusion and propaganda which is generally a conclusion unsupported by facts, there is little choice from the standpoint of education.

The practical approach to geography teaching which is most likely to be productive is neither new nor is it easy. It consists of the recognition that all nations and all areas possess problems,

[5] Cyril F. Richard, The Function of the Liberal Arts in Reconstruction, *Journ. Higher Ed.*, Vol. 15, 1944, p. 65.

problems which are so important that the solution of them is essential to the very existence of those nations and areas. These problems color a nation's relationship with other countries. By understanding them we can go a long way toward understanding the country and dispell the feeling in our own citizens that other peoples are merely foreign and alien. In our own country, regions likewise have their individual problems and likewise they color the relationship of the individual region to the nation as a whole. So the emphasis upon problems will aid our students in the interpretation of both foreign countries and sections of our own country as well. Thus the existence of the *estancia* or landed estate in the Argentine throws much light on why this nation has followed totalitarian lines of action even when Axis satellite nations, convinced of the defeat of Germany, have deserted it. Likewise the problems of soil depletion, surplus population, and an unbalanced economy go far to explain the attitude of our own South toward national issues ranging from federal aid for education to the regulation of freight rates.

The practical approach to geography is not new. It is merely placing emphasis upon training for citizenship. It is true that there is a greater stress laid on a knowledge of foreign countries, but this is natural since the position of the United States with relation to the world has altered. Citizenship fifty years ago could be conceived as largely the relationship of the individual to the nation whereas today there are indications that it will develop into the relationship of the individual to the world thru the nation. The importance of citizenship training scarcely needs to be stressed. There is hardly a list of educational aims which has appeared in the past century upon which it does not occupy a prominent place. Marschner well summarized its importance when he wrote "In a country having in the strictest sense a government of, by and for the people, one of the requisites to successful government is that the people know their country, and know their position with regard to the rest of the world. Patriotism, usually defined as love of country and its institutions, is turned into realistic channels and follows one of da Vinci's truisms, namely, that 'it is impossible either to hate or love a thing without first acquiring knowledge of it.' "[6]

Just as the instructor will not find the practical approach new, neither will he find it easy. Geography has never been an easy sub-

[6] F. J. Marschner, Maps and a Mapping Program for the United States, *Annals Assn. Amer. Geog.*, Vol. 33, 1943, pp. 215-216.

ject to teach properly. It is a discipline of almost constant change. New industries spring up, population shifts, and land use changes. Constant work is necessary in order that out-moded material be dropped and replaced by that which is up-to-date. Since the practical approach demands not only attention to geographical information but also attention to current problems, even more study on the part of the instructor will be necessary. An even greater emphasis will be placed on current books, magazines, and newspaper material than is usually given at present. The rewards for this extra work are the only rewards which good teaching has ever paid—the satisfaction of a job well done. In this case we may have a small additional dividend, the realization that we have done a small bit to bring a little more reason and order to a thoroly chaotic world.

Three Promising Fields in Geography

The rising interest in geography will probably be felt in all branches of the subject. There are, however, three fields which give unusual promise in the early postwar years. The first of these fields is aeronautics. One does not need to go so far as to believe that we shall all travel in stratoliners via arctic routes as soon as the fighting stops, or that every garage will house an airplane, to appreciate that air travel will greatly increase in the future. Altho individual navigators, as used by the armed forces, will probably be largely replaced by radio navigation aids, map reading will remain a *must* for the pilot. Whether traveling by day or by night check points on the ground will be a necessary assurance that the correct route is being followed. The study of weather will likewise become more vital. Man, by developing means of travel from those which were primitive thru the carriage and wagon to the train or the automobile on the all-weather road, has rendered himself apparently more and more invulnerable to the vagaries of weather. It is only the exceptional storm which needs to disturb him, and which will force him to alter his plans. But when he takes to the air his earlier vulnerability returns. Planes will be grounded or will take off on schedule depending upon the weather, and weather will likewise determine the routes which will be followed. Thus directly an interest in aeronautics will stimulate the study of cartography, climatology, and meteorology. Indirectly the stimulation will be more extensive as the rapidity of the plane reduces the amount of

time required to travel and thus makes what has been considered a prolonged trip merely a casual journey.[7]

The second field of unusual promise is that of economic geography. Problems of trade, of land use and of developing manufacturing are going to plague us as a nation and as a world. The importance of trade finds full recognition in the Atlantic Charter with its guarantee of equal access to raw materials by all nations. As a country we shall be faced with a tremendous ability to produce and shall naturally wish to develop new markets abroad to absorb these surplus goods. We have always relied upon trade, but it took a war to show us just how much. We never fully appreciated foreign commerce until rubber tires were unattainable, coffee was rationed, and tin cans were replaced by plastic and cardboard containers. New opportunities and numerous problems in commerce should mean a revitalizing of commercial geography.

Land-use problems on both a national and a world scale will be numerous. Depleted mineral resources, such as petroleum, will require measures of intensified conservation and an increased effort to locate new fields and learn more of the conditions of those already known. Some of the returning millions of veterans are going to want farms, either in this country or in some territory such as Alaska. The question as to the advisability of encouraging them in those lines both from the national viewpoint and from that of their own best interests has already arisen. The problem of what is best for the numerous refugees which the European war will produce also has to be met. Scattered over the world there is a vast amount of unused or partly used land, but only a small amount of it seems to be commercially valuable. So the problem is not the simple one of merely finding space, but as Isaiah Bowman has pointed out[8] it is a far more complex one. It is not even as simple as finding what the unused land can produce, but this plus such factors as markets, political and social conditions, and group psychology all play a part. Despite the complexity of the land-use problems of the world, it is mandatory that some workable solution be found if society is to reach the condition of peace and of prosperity to which it aspires.

[7] For a more detailed discussion of the relation of aeronautics to geography see M. H. Shearer, Aeronautics and Geography, JOURNAL OF GEOGRAPHY, Vol. 41, 1942, pp. 228-233.

[8] Commanding Our Wealth, *Science*, Vol. 100, 1944, pp. 229-241.

The third field in geography which gives unusual promise is that of political geography. Americans are as strongly desirous of peace today as other Americans were at the end of World War I. Then, however, we sought to withdraw from the rest of the world and to accentuate in our minds the distance of the oceans separating us from most of it. While we maintained territorial possessions we failed to maintain sufficient armed forces to protect them. We refused to coöperate with other nations in a League to maintain world order. Today the United States gives every indication of not wishing to follow the same road twice. The Gallup Poll[9] in July 1944 reported that 72 per cent of the American people approved joining a league, an increase from the 26 per cent who approved in 1937. The platforms of both major political parties carried planks pledging this country to join an international body for the preservation of peace. Congress is considering the means by which our armed forces will be kept at a sufficient size to perform adequately the necessary international police work and to give sufficient protection at home. With the radio and airplane the world has so shrunk that our withdrawal from it is impossible.

As President Hutchins of the University of Chicago has pointed out,[10] however, a shrinking world alone will not make for neighborliness. A close proximity may produce good will or merely friction. Knowledge and an understanding of the problems of other nations will materially lessen the possible friction and increase the good will. An appreciation of this fact is the basis of the program of cultural exchanges with Latin America which has been so assiduously pursued by our own government, especially in the past few years. Political geography, properly taught, likewise increases the understanding of the problems of other nations. Thus France in terms of its long-standing boundary disputes with Germany, a nation largely agricultural and lacking heavy industry and dependent upon the highly skilled production of luxury goods for exports, is a picture of France which is realistic. No longer does it appear as a country which is merely foreign, irrational, and bizarre. This understanding of the problems of other countries will enable us to implement the good intentions of international cooperation which we now have and thus win the peace as well as the war.

[9] As printed in *The Washington Post*, July 2, 1944.

[10] Robert M. Hutchins, Toward a Durable Society, *Bull. Amer. Assn. Univer. Prof.*, Vol. 29, 1943, pp. 467-482.

SOME PROBLEMS OF MAP PUBLISHERS RELATED TO WORLD WAR II*

D. E. SITES
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Superintendent John Doe announces *No Map or Globe Purchases for the Duration.* Early in this war the above was a rather frequent headline. Had map publishers taken such announcements seriously, publication of educational maps would have been discontinued until the end of the war and until a peace conference completed its job of rearrangement of national boundary lines.

Publishers were somewhat amused as they read these sensational headlines and the discussions that followed them. They read between the lines the real meaning of the declarations and discussions. The official who made such a declaration was really showing how much he was out of touch with the real objectives of modern courses in social studies and geography. That the policies of even the most radical of these officials would change before the war ended was obvious.

The modern geography teacher was well aware of three important facts concerning educational maps and globes. First, that, in the teaching of geography, national boundary lines constitute only one small part of the story the map has to present. Second, that children attending school while the war is being fought continue the study of geography. Third, that the increased interest in maps on the part of adults after leaving school makes it imperative that the children be taught how to read and use maps and globes.

INCREASED DEMAND FOR MAPS AND GLOBES

The increased sale of school maps and globes over the past few years is evidence of the fact that this problem solved itself in rather short order. The truth is that the problem of securing materials and sufficient labor to fill the orders became the major factor in the situation rather than the problem of getting business.

Increased demand for maps and globes came first from the general public. The large number of geographical place names mentioned in the daily papers and in magazines sent the readers scurrying for atlases, maps, and globes. Names like Tulagi, Guadal-

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canal, Bengasi, Kiska, Godthaab, Akyab, and others were practically unknown to the average reader until the events of World War II brought them to the front pages of the daily paper.

Soon after the attack on Pearl Harbor, map publishers were deluged with orders. Orders came in by mail, by special delivery, by telegraph, and by telephone. These maps called for plenty of detail. The orders came from individuals, libraries, bookstores, drugstores, department stores, five- and ten-cent stores, novelty stores, hardware stores, and others too numerous to mention.

As young men and women were scattered to all parts of the world by the Army, the Navy, the Marines, the Red Cross, and other organizations connected with the war, the demand for maps, atlases, and globes grew proportionately. Every home felt the need for maps. Every publisher was pushed to capacity to meet the needs created by the war.

The increased interest in maps on the part of the public was soon reflected in the schoolroom. Little Mary Smith in the fourth grade, Johnny Jones in the fifth grade, and even Ruth Miller in the third grade came to the teacher with questions. "My brother Charles is in New Caledonia? Where is New Caledonia? How could my brother James get to that place from here?" Teachers, facing these questions and many others like them, found themselves in need of maps and globes more than ever before. They found it necessary really to teach the children how to read maps. Children were intrigued by the many different types of maps that began to appear in magazines and in advertising. The different types of maps that were brought to the attention of teachers put them on the spot at times. These teacher problems were very quickly transferred to the publishers. Teachers wrote letters asking for help and for more information about maps.

New Types of World Maps Suggested

As often happens in a situation like this, many ideas were expounded by the public concerning the way maps have been made and the effect of these maps upon the world situation. Some writers even went so far as to say that the world had gotten into this global war because of the kind of world maps the publishers had been giving them. "People," they said, "have failed to understand each other because the concept of the world has been based upon the Mercator projection." Some said, "Get rid of all world maps except one with the North Pole in the center, and many of our world problems will be solved."

People devised all kinds of new ways for showing a picture of a spherical world on a plane surface. Among the projections promoted were the Azimuthal Equidistant, the Azimuthal Equal Area, the Casson, the Cahill Butterfly, the Dimaxion, the Icosahedron, the Equal View, and the True View. The backer of each of these ideas was willing to argue loud and long that he had found the solution of the problem. "How show a true picture of the world on a plane surface?" Experienced map makers were reminded of the perpetual-motion machine inventors. Thru the ages men have wasted countless hours trying to invent a perpetual-motion machine. A world map drawn on a plane surface can no more show a true picture of the whole world than can a mechanical device operate without the continual application of power.

PUBLISHERS RE-STUDY WORLD MAP PROGRAM

All these ideas have made it necessary for publishers to re-study their world maps. They were compelled to re-study them from the standpoint of their usefulness to geography and social studies teachers in this new situation. They were compelled to raise the question, "Shall we discard all world maps now being published and sold to schools and replace them with some new cure-all projection?" or "Shall we round out a world map program with the addition of one or more new projections?" Publishers, so far as the writer's observation has gone, have taken the latter course by adding to their present world-map program.

The publishers are fully aware of the fact that there is much disagreement among both the educators and the publishers as to the major objectives of world maps projected on a plane. There is also disagreement as to the best type of world maps required to meet those objectives. A visit to the exhibits of the publishers as they are set up in the exhibit hall will furnish excellent proof of the statement just made. We do not doubt that each publisher is producing what he honestly thinks is the best possible world map program. We believe also that each school system selects what seems to its geographers to be the best possible program of world maps. The fact that these programs vary with the different schools is further evidence of the lack of unanimity of opinion.

GLOBE AS A WORLD MAP

In connection with the increased interest in the world and its affairs has come a realization that the globe must play a more important part in teaching a true concept of the world. A study of

the problem soon reveals the fact that true concept of shape of the earth, proportionate amount of land and water, relative position of places, comparative distances between places, and directions on the surface of the earth can be gotten only from the globe. Over many years publishers have overemphasized the astronomical functions of the globe by surrounding it with many fixtures all designed for the teaching of astronomical relations, most of which are beyond the understanding of elementary grade students. The free, or so-called cradle, globe has proved to be the solution to this problem. Teachers are now using the free globe to present to the children a true picture of the world.

Perspective Maps Growing in Importance

One of the ideas which more and more is finding a place in the geography program, and which publishers of both geography texts and wall maps must recognize, is the oblique or perspective map. This type of map cannot present the whole world in one view. This type of map is about the same thing as a picture taken of the globe; one side only is shown. In looking at the picture one gets the feeling of looking at the whole world.

Some textbooks are beginning to use the perspective type of map, particularly in the lower grades. We venture the prediction that the time will come when no social studies or geography text, designed for grades below the fifth, will contain any other kind of map. This type of map used along with the free globe will develop a spherical concept in the minds of the children so well that the distorted flat world map can be used for the purposes which it can best serve without giving a wrong idea of the world to the student. We cannot pass the oblique maps without giving credit to Dr. Raisz for his fine contribution in this field. Every geographer has by this time had the pleasure of examining his new atlas that contains nothing but perspective-type maps.

How Is the Map to Be Used?

We have indicated above that beyond the fourth grade a need may arise for a picture of the world projected on a plane surface. No geographer or publisher would dare say that a flat world map gives the student a true impression of the world. Deetz and Adams in "Elements of Map Projections" state, "In order to decide on the system of projection to be employed, we must consider the purpose for which the map is to be used and the consequent conditions which it is most important for the map to fulfill." The pub-

lisher, having selected the best projection for a given purpose, can do only part of the job. He cannot prevent the child from getting a distorted view of the world from the map he has published if the teacher keeps that map constantly before the child, doing nothing in the way of explaining the distortions or the elements of truth portrayed by the particular map.

A normal college instructor was criticizing a particular world map. "I tell you," she said, "I show my students how badly the waters of the Pacific Ocean are distorted on that map." We said, "Good! What do you do about the world map that hangs beside it? On that map we note that North America is shown to be about eight hundred miles wider east and west than is South America. Do you explain that distortion?" She just then learned for the first time that the distance east and west across South America at its widest point is greater than the distance east and west across North America at its widest point. When a teacher looks at a world map that is new to her and remarks, "What a wrong impression of the world that map presents to the children," she really means to say, "How different the distortions on that map are from the distortions on the world map to which I have been accustomed."

SELECTING WORLD MAPS

Since no one flat world map can present more than a limited amount of truth, the following suggestions seem quite important. First, if only one type of projection is used thruout the school experience of the child, that will tend to become fixed as his concept of the world. Second, the best preventive for a wrong concept is several types of flat world maps each used for the truth it is able to present correctly and with constant explanation of the relation of the flat maps used to the globe.

We presume that every map publisher has worked out his program on the basis of what seems to him to be its greatest usefulness to the schools. The Rand McNally program is the only one I am privileged to present here. I present that, not as the last word, but as representing one philosophy concerning a world map program.

Beginning with the latter part of the fourth grade or the start of the fifth grade, we introduce an equal-area world map that makes possible a true comparison of land areas and the approximately correct distance relationships on the land masses. This map presents shapes of land masses approximately as they are on the globe. The projection we used for that is the sinusoidal interrupted projection in modified and simplified form. The principal purpose of

projecting the world on a flat surface, so far as elementary geography is concerned, is to make possible certain comparisons that cannot be very well made with the globe or the perspective type of map. Among these are latitude, size of continents, size of political units, areas of lowlands, areas of highlands, areas of climatic regions, and areas of vegetation regions.

The second world map, which we would introduce about the fifth grade, would be the Azimuthal Equidistant projection, north polar centered. This map has been made necessary because of the airplane. We need it, not only for the possible air routes over and around the Arctic regions, but also for a clear picture of land relations of the Northern Hemisphere. This type of map may also be used for a study of north-and-south and east-and-west direction relationships. Many persons are surprised to see the Hawaiian Islands directly south of Alaska when they look at this map.

The third map is the old-timer, the Mercator, which undoubtedly will continue to find a place with the mariners and many others for some time to come. If there were no other reason for introducing this world map to the school children, it should be introduced in the upper grades so that the teacher may be able to point out its distortions and the true facts that may be gotten from it.

We believe that the World War world map problem is best solved if we study the overall picture from the child's first lessons in geography to his graduation from high school. Summarizing this program as above proposed, we begin with the globe and the perspective map. We add to this an equal-area plane-surface map of the world, then an Azimuthal Equidistant world, north polar centered, and last of all a Mercator world.

Problems for Map Publishers

The old problem of how much detail to put on a map has shown itself again, and the publisher again finds himself in the midst of a great variety of opinions on the part of geographers. To please all of them, again seems impossible. Places that previously seemed relatively unimportant to the geography teacher have suddenly been brought into the lime light. Finding an exact basis that every publisher can follow for selecting towns and cities seems an impossibility. Some educators have said, "Use population as a basis." We believe most geographers will agree with us that this would be about as sane as using the number of soldiers engaged in a battle to determine the decisive battles of the world's history. We believe that the geographer editing the map will have to be guided

by his own judgment until such time as this or some other large group of geographers can agree upon a basis that all map publishers can use.

Wall-map publishers are faced anew with the problem of how to show distance on a map. Shall they use statute miles, nautical miles, or hours? Time units probably represent the oldest method of showing or thinking of distance. Uncivilized people spoke of places as being so many moons away or as so many days or suns. The greatest difficulty we face in using time units as a basis is the constantly changing rate of speed and the varying speeds of the great variety of vehicles used in transportation today. Schools do not want to purchase maps that must be thrown away every few months or even every year or two because of out-of-date distance units. We landlubbers have learned to think of distance in terms of statute miles. The seaman has become accustomed to using nautical miles. The airplane crews using a vehicle that flies over both land and water are using nautical miles. Whether maps for schools should provide a scale in statute miles, nautical miles, or hours of flying time is as yet an unanswered question. Perhaps educators can help publishers in the solution of this problem.

MAP REVISIONS ARE COSTLY

We suppose that budgets should not be mentioned before an educational group like this. Publishers would consider it grand and glorious if the day should arrive when all they had to think about was the publication of new ideas without any thought of the effect on the annual statement. However, along with the creative cost of publishing new products comes the tremendous cost of revising when the war has ended. In this connection the publisher will be up against the problem of deciding just when to revise without having to do the job over again, because some subsequent peace conference decides the job was not done correctly at first. Some predict that it will take years to get political boundaries on anything like a fair degree of permanency.

We have tried in this brief paper to review some of the problems that confront publishers of maps and globes as a result of World War II. We have tried to show the relation of the geography teacher and the publisher in trying to solve these problems. We do not claim the perfect solution of any of these problems. We are, however, trying to think of them in the light of the best interests of the school children of America. In that respect we believe ourselves to be co-workers with the teachers.

SOME EXPERIENCES IN TEACHING SIXTEEN HUNDRED CADETS OF THE UNITED STATES ARMY AIR FORCE*

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J. R. SCHWENDEMAN
University of Kentucky

These boys represented every state in the United States excepting Maine, New Hampshire, and Vermont. The accompanying map (Fig. 1) show this group of boys to be a fairly representative cross-

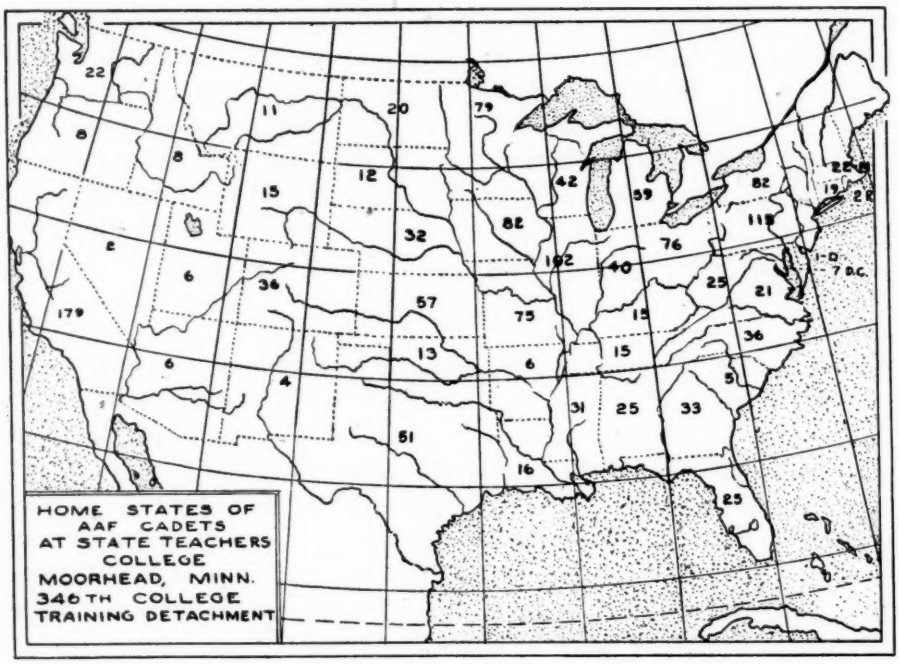

FIG. 1

section of the United States. Practically all had completed their high school work. Few had college training to any appreciable extent. No exact tabulation was made but in orally interviewing each class about two of each fifty admitted any geography training beyond the grades.

* Prepared for presentation at the meeting of the National Council of Geography Teachers, Cleveland, Ohio, Sept., 1944. The meeting was cancelled on request of the Federal Government. Available papers are appearing in the JOURNAL.—Editor

RESULTS OF DIAGNOSTIC TESTS

In the JOURNAL OF GEOGRAPHY for March, 1944, Professor Harry K. Hutter, who assisted the author in the program, presented a summary of our diagnostic test on some elementary global concepts as represented on a desk Mercator projection. Since the results

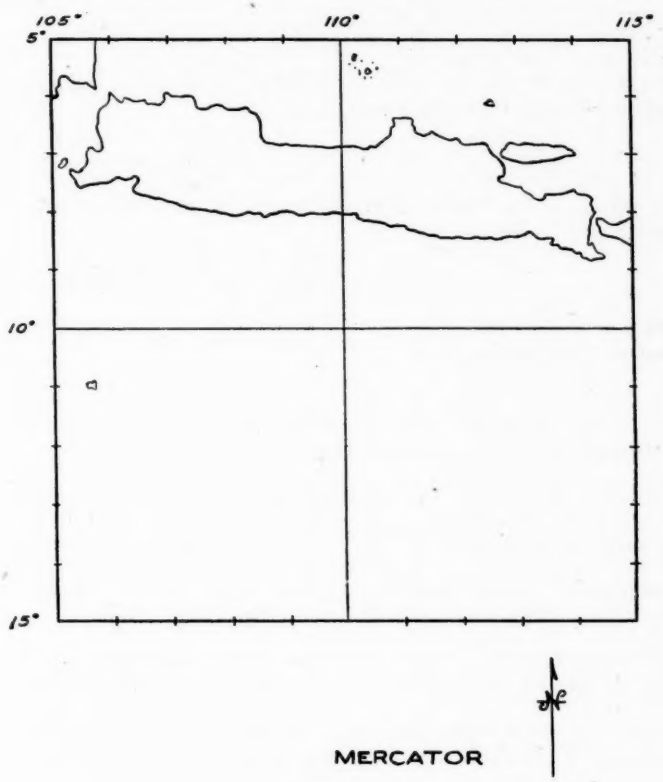

FIG. 2

remained the same during the balance of the program they will again be briefly summarized here.

Less than half knew anything about the location of the Equator or the light lines—Cancer, Capricorn, Arctic Circle, and Antarctic Circle. Probably several who associated name and symbol correctly were guessing. About half knew which map symbol represented the Prime Meridian and the International Date Line. Less than half knew which lines represented parallels and which meridians. Hence these terms carried no directional significance. An insignificant number of about 20 per cent had any idea of latitudinal

or longitudinal sequence or limitations. None, to my knowledge, had any conscious method for proceeding in labeling any given parallel or meridian with the proper degree of latitude or longitude.

TABLE 1—MILITARY GEOGRAPHY

SUBJECT: MAP INTERPRETATION

Page .....

Lesson .....

1. From the accompanying chart copy the numbers representing latitude and longitude in the following blanks:
   Degrees of latitude 1
   Degrees of longitude 2
2. Indicate which of these degree numbers indicate parallels and which meridians.
   Degree numbers of parallels 3
   Degree numbers of meridians 4
3. In which two of these four hemispheres is this map located—Northern, Western, Eastern, Southern. 5
  6
4. To which of these three reference lines is this map nearest? Equator, Prime Meridian, International Date Line 7
5. The land mass mapped here has fifty thousand square miles of land. Which of these land form terms apply to it? (1) Continent (2) Island (3) Peninsula (4) Isthmus 8
6. This land mass represents a part of: (1) West Indies (2) East Indies (3) Aleutians (4) Philippines (5) Hawaiians (6) British Isles 9
7. The exact name of this land mass is (1) Cuba (2) Java (3) Australia (4) Luzon (5) Ireland (6) Newfoundland (7) Madagascar (8) Honshu 10
8. The largest city of this land is located at 6 degrees 16 min. and 106 degrees 48 min. Mark an X at its approximate location on the map. 11
9. This city has over one/half million population. Select its name from the following: (1) London (2) Batavia (3) Sydney (4) Honolulu (5) Cairo (6) Calcutta (7) Manila (8) Singapore (9) Tokyo 12
10. About forty-two million people live on this land. Give it a comparative population ranking with the following countries numbering the country with the most people first, then second, third, fourth, and fifth in order of population.
    Russia 13
    Germany 14
    Canada 15
    This Land 16
    United States 17
    Argentina 18
11. The population of this land is (1) dense (2) average (3) sparse 19

12. Select from the following products those of which this land is important in production:

(1) petroleum	(7) coconut products	20
(2) iron ore	(8) apples	21
(3) wheat	(9) quinine	22
(4) rice	(10) cane sugar	23
(5) beet sugar	(11) dairy products	24
(6) seal skins	(12) automobiles	

13. In which three of the above products is the United States most deficient and must resort to trade? 25
.....26
.....27

14. Which of the meridians on this map is a standard time controlling meridian? What is the time zone number of this meridian?
Meridian 28
zone number 29

15. When it is 18:00 P.W.T. Monday what is the time in the above zone of question 14?
hour 30
day 31

At this same hour what is G.C.T.?
hour 32
day 33

16. Below are listed the mean monthly temperatures of three cities. Which of these represent the mean monthly temperatures of this land? Deg. F.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Range
(1)	26	27	37	47	58	61	74	73	66	55	41	30	48
(2)	78	78	79	79	80	79	79	79	80	80	79	78	2.0
(3)	78	76	71	62	54	47	48	50	59	65	71	76	31
(4)	–58	–48	–22	8	35	54	59	51	36	6	–34	–51	117

Station 1, 2, 3, or 4 34

17. Which of these average annual rainfall figures is most representative of this land? 72 inches, 3 inches, 22 inches, or 40 inches.

18. In which climatic zone and wind system is this land?
Zone: Torrod, Frigid, South Temperate, North Temperate 36
Wind System: Monsoon, Westerly, North East Trade 37

19. What is the political status of this land: Independent, Under control of (Name country, if any). 38

Recognition of the continents, oceans, and major archipelagos on the map was much better done at about 75 per cent correct.

To gain further knowledge of the Cadet's geographic concepts and his ability to associate facts with geographic symbolization the following map interpretation test was given. (Table 1 and Fig. 2)

Space will not permit a detailed presentation of the results but the average score was 55 per cent. The scores ran either low at around 10 to 14, of the 38 items, answered correctly or comparatively high at around 25 to 30 correct. The nature of this examination permitted guessing and if correction were made for it most scores would have been negative. Items 14 to 19 inclusive were almost always omitted or erroneously answered. Subsequently these same items of Longitude and Time, and climatic conditions of localities proved most difficult for the Cadets to achieve effective comprehension.

REMEDIAL METHOD

To overcome difficulties in locational skills and concepts a combination of unlettered desk maps and an atlas were used. After the fundamentals of latitude and longitude were explained and locational skills demonstrated the Cadets were asked to study their atlases in a directed laboratory period and note the relation of the Equator and Prime Meridian to land forms and water bodies and then make notations on their desk maps. For instance, when they discovered that the equator was associated with the mouth of the Amazon this location was written on their desk maps. This procedure was repeated for parallels and meridians until a fair efficiency was achieved in relating locational symbols with earth features as represented on various map projections. A repetition of the diagnostic tests showed an improvement from about 50 per cent to 90 per cent. An application of this

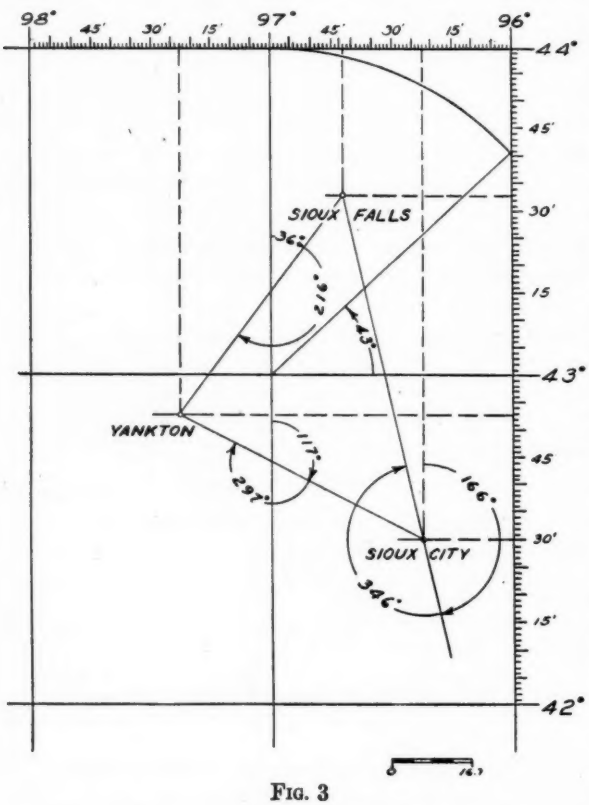

FIG. 3

method of associating an imaginary line with earth features was then briefly made by having the Cadets draw an imaginary flight line between two points and the naming of the earth and cultural features over which they would fly in making the flight. However, the difficulty in obtaining anything like 100 per cent proficiency may be surmised by noting that the Army Directive called for about four years of college geography to be taught in 60 fifty minute periods. By this is meant the geographic concepts that are normally developed over that period of time by a college student majoring in geography.

ARMY DIRECTIVE FOR AIR CORPS GEOGRAPHY

Here are some of the major topics called for by the Army Directive: Earth dimensions; map projections, map interpretation, and earth reference systems with the geographical coordinates; direction and distance relationships; time and time conversion with intensive drill on longitude and time, physiography, weather and climate, regional geography of all continents in present combat zones, economic geography of nations engaged in this conflict, and geopolitics. The above is indeed a brief summary of a directive that covered five single spaced typed pages. Hence the foregoing

TABLE 2—MILITARY GEOGRAPHY

SHORT QUIZ SERIES

Direction: All answers are to be obtained from the accompanying desk map.

1. Which of these numbers represent the meridians on this map 96, 43, 98, 42, 44, 97

Meridian 1
Meridian 2
Meridian 3

2. Name the hemispheres in which this map is located.

Hemisphere 4
Hemisphere 5

3. Give the latitude and longitude of Sioux Falls.

Latitude 6
Longitude 7

4. What is the bearing from Sioux City to Yankton?

Bearing 8

5. What is the approximate compass direction going from Yankton to Sioux City?

Compass Direction 9

6. The map distance from Yankton to Sioux Falls is 3 and ½ inches. What is the actual distance in miles? Select your answer from these given—(1) 50.6 (2) 100 (3) 55.68 (4) 58.45 (5) 66.75

Distance in miles 10

diagnostic tests were used and only the most simple and effective methods to correct defects were devised. Some illustration of these methods follow.

Laboratory Exercises and Drills

Exercise 1. After a broad background in locational skills and mathematical relations had been developed specific laboratory

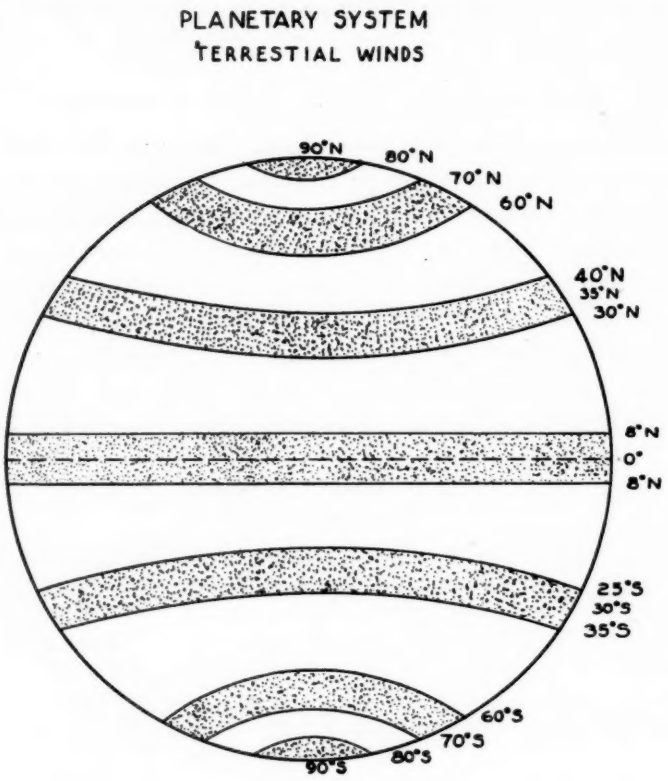

Fig. 4

study was conducted with the help of such desk maps as Fig. 3. After the laboratory period a short ten point quiz was conducted (Table 2). Altho this test may seem simple no class achieved 100 per cent efficiency on it.

Exercise 2. On the accompanying chart (Fig. 4) laboratory study was conducted on the geography of the planetary winds in direction and position on the globe. Here again it appears that

after the Cadets had been instructed on the geography and physics of the world winds from effective wall maps and charts and had practiced placing arrows on this chart representing the wind directions and labeling the winds and pressure belts under guidance they could take the chart and without help or reference and mark thereon the geography of the major wind systems. Yet we rarely achieved more than 80 per cent correct per class of fifty Cadets.

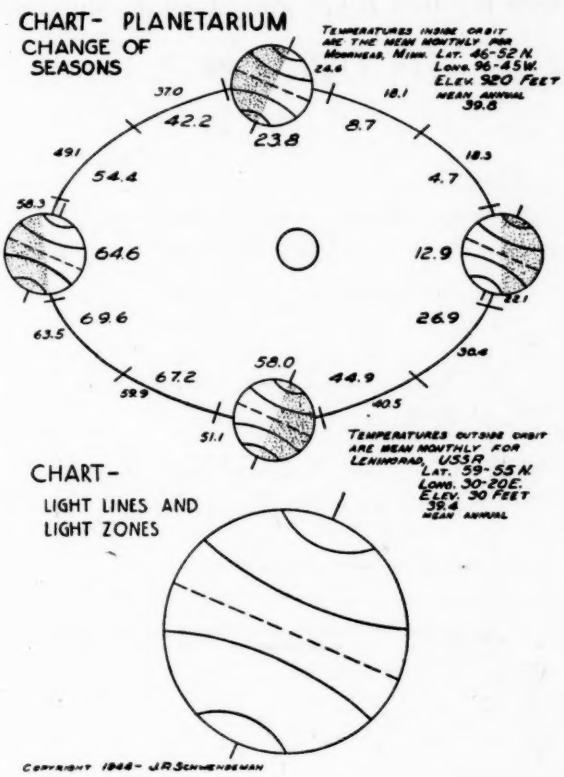

FIG. 5

Exercise 3. On the chart, Change of Seasons (Fig. 5), the laboratory work consisted in relating the seasonal sequence of isolation and temperature by writing in the months and seasonal terminology properly. A great deal of teaching effort was expended in explaining and demonstrating this most important phenomenon. The blackboard, mechanical planetarium, graphic globe, and charts were used. But the seasonal progression at any one locality plus varied nature of seasonal changes in other localities always proved confusing. No mathematical tabulation of the results was made but our results were discouraging.

Exercise 4. Work in physiography and the interpretation of surface features from map symbols always proved interesting. It was found extremely difficult to convince many of the Cadets that streams ever flowed north or to the "top" of a map. They found it very confusing to recognize downslope and upslope, spurs and ravines, canyons and ridges, mesas and plateaus, and to visualize

the general nature of the terrain from casually looking at a topographic map. On the map of Clay County (Fig. 6) our laboratory work consisted in coloring the map in order to bring out the general levels and pattern of the landscape and then labeling different terrain features such as valleys and ravines with arrows for slope direction and stream flow. Even after studying this map and having seen the Red River almost all of the Cadets were surprised when they were assured that the Red River actually flowed north. (This fact is not easily discerned by casually looking at the Red River in low stage.)

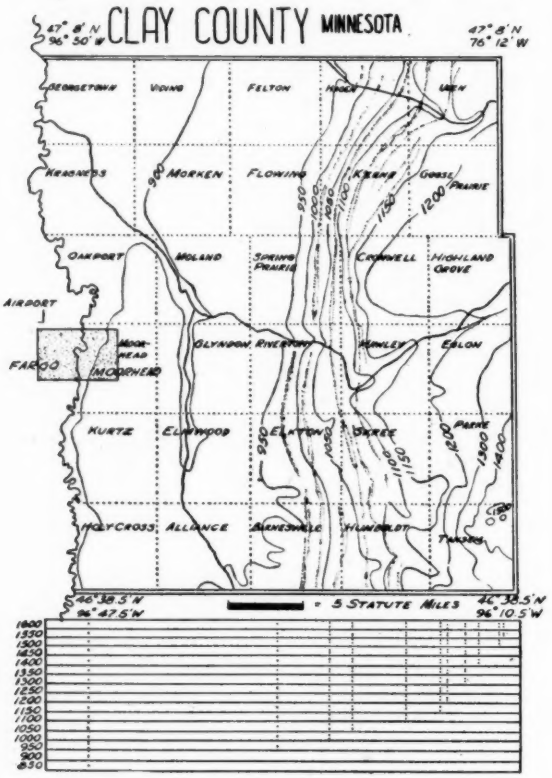

FIG. 6

CONCLUSIONS

On the basis of the foregoing it should not be assumed that the work with the Cadets was considered either unattractive or fruitless. The boys were capable and eager to learn. It was a pleasure to teach them. They were crowded with other subjects and military duties. They had little time for extra work in our field. With this hastily acquired background in geography most of the Cadets successfully achieved in subsequent training the necessary proficiency required by the Army for the serious assignments in combat.

But it should be emphasized that these boys represented fairly well the average high school graduate who comes to college. He has a meager background in geography. If he takes geography in college it will more than likely be far above his level of comprehension. He may "learn" enough to get a credit but he will not under-

stand the subject. Except for a few students our college work in geography is largely futile. If the field of geography has a vital mission for peace it can not be realized on the present basis of curricular offerings and instruction. The level of geographic concepts was fairly well illustrated by a quiz program heard over the radio on August 20 this summer. The prompter asked a WAVE "Where in the world are the days and nights always of equal length?" The WAVE did not know. The prompter suggested the middle of the world but the only response he got was "I suppose I should know." Whereupon he told her that the Equator was the answer he desired.

World understanding is the most important objective in the study of geography. This can be achieved only by understanding the physical environment and its influence on man. If this understanding is to be an effective agent in promoting peace it must be well nigh universal. This is a big order. Yet when the Army found that geography was essential to victory the necessary steps were taken. When a Christian nation goes to war it calls on Almighty God for help and then sets to work for victory regardless of sacrifice or cost. Can peace be achieved in any other way? The people have always won the wars. Statesmen, lacking popular support, have invariably lost the peace. If geography is a medium toward peace then students must be given the same incentive and opportunity to understand it as was provided in the war program. Geo-politics became an effective medium in world affairs only when a powerful nation implemented its precepts.

COMMUNITY VISION THRU GEOGRAPHY*

J. Granville Jensen
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During the last few years geographers have contributed much to aid the armed forces of the allied nations thru knowledge of foreign regions and thru special training in fact-gathering and fact interpreting. You and I know this and at times take it for granted, but does the public know of the value of geography? Does the public know what scientific geography really means? Does the public know of the need for sound geographic thinking in schools and in public life? I believe that until every citizen realizes the unique value of geography and geographic thinking as tools for use by adults, in understanding the problems of the local and world community, that geography will remain untaught in far too many high schools, colleges and adult education programs.

Threshold of Greatest Test

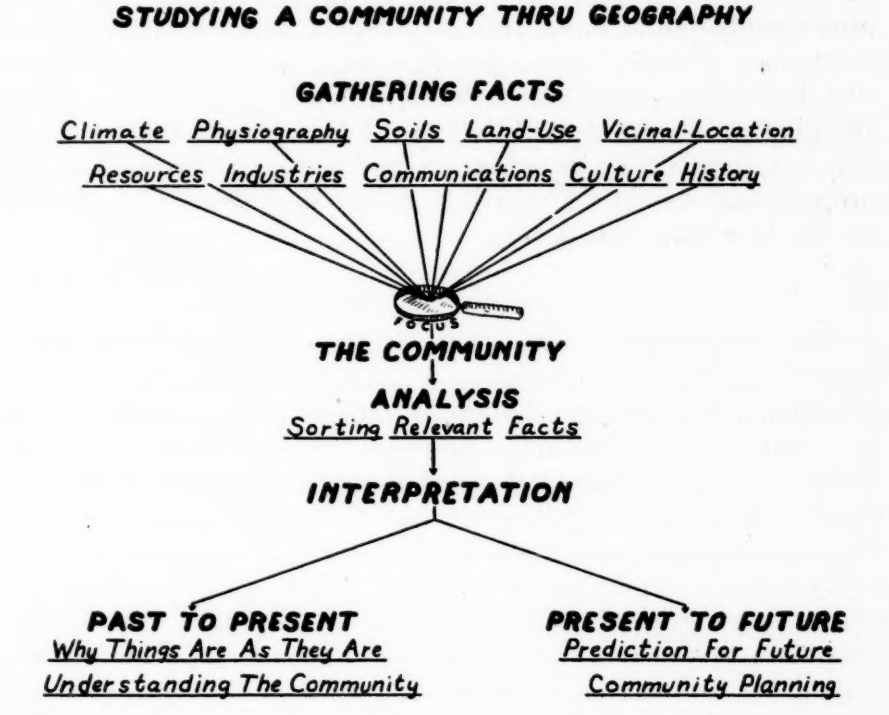
As teachers of geography we stand at the threshold of our greatest test. Now, as never before we must go back to our students with the drive of enthusiasm to make geography indispensable in the education of every citizen—without the stimulation of war! We must so teach geography that every history teacher realizes the important contribution geography can make to the full understanding of history. We must so teach geography that every planner at all levels—city, state, nation and world, becomes aware of the nature and scope of scientific geography and of its importance in the task ahead. We must so teach geography that our pupils and students are changed for good toward being better citizens of the community and of the world as a result of having studied under us for a semester or perhaps several semesters. Here is a challenge. The time for action is *now!*

Geography Must Show the Way

One way to make geography real is to turn our attention for at least part of a semester to the home environment. It is of first importance to recognize and understand local geographic conditions as a means of understanding the community, and later these same

* Prepared for presentation at the meeting of the National Council of Geography Teachers, Cleveland, Ohio, Sept., 1944. The meeting was cancelled on request of the Federal Government. Available papers are appearing in the Journal.—Editor

geographic observations and understandings will serve as a springboard for understanding comparisons with other parts of the world. I like to think of geography as the science that gathers all the information about the community and brings it into focus for analysis and interpretation. But, geography, if it is to be more than a dry



TOOLS OF FACT GATHERING	TOOLS OF ANALYSIS
Field Mapping	Land-Use Maps
Observation	Soil Maps
Interviews	Population Density Maps
Note Taking	Graphs Of Trends
Reading	Charts and Diagrams

classroom study, must go a step further and thru sound geographic interpretation of conditions, show the way that man must take if he is to achieve the optimum development of the community in terms of the natural environment. This is the basis of planning. There is great need for more and better geography in planning at all levels, world, nation, state and community. There is critical need

for more and better geography teaching especially in the senior high school, college and adult education programs, for it is at these levels that you are training those who will soon do the planning and make the laws that put the best plans into action. In other words, it is not enough that we have good geographic thinking on the part of all citizens. Good sound geographic thinking and planning must be put to work! It is not our task to put it to work, but it *is* our task to teach with such enthusiasm, that our students, when they leave the schools and colleges, will use geography in understanding problems of local and world importance, that they will vote for, and influence other people to vote for, the law makers and professional planners who will make the best plans and who will put the best plans into action.

The Geographic Method

This diagram is an attempt to visualize the method and objectives of studying a community, in the light of this philosophy of geography. The first step is that of gathering all possible facts of the environment which may influence the community. (The ten divisions here noted are not solely the concern of geography, tho the first six are recognized by most as the basis of geography. It is this basis in the physical facts of the environment that gives geography a firm foundation on which to build and that makes the science of geography the basis for the entire social studies program!) In this phase students must go out into the field, into the community to see conditions, to talk with all sorts of citizens, farmers, bankers and businessmen. Actual mapping of land-use is a necessity and even if a good map is already available, have each student make his own for at least a part of the area. The way to learn geography is to go out and do field work! I have on a number of occasions made the statement that too many teachers were afraid to go out of the classroom because they knew too little about the local environment. It is high time we all learn more about things just outside of the window, for geography students more than other students must look up from the pages of the textbook to the soils and farms, to the fields and mountains, to the industries and resources that form the environment. These are the best texts.

Having gathered information over a considerable time the task of focusing the information is before us. Each bit of information is analyzed to see how it fits in, some facts have no bearing on a

geographic study and are sorted out. Other facts, such as the presence of a long hill, may have influenced the pattern of streets or the location of business areas. These are the facts to be analyzed and classified for further interpretation.

Interpretation for Future Good

Interpretation is the synthesising process in which students begin to see how the facts of the environment, working together, influence the development of the community. Interpretation is divided into two levels. "Past to Present" is the lower level and should be reached in the junior high school grades. The emphasis here is placed on trying to understand how geographic conditions have influenced the development of the community to arrive at its present condition. As one moves into the senior high school, on into college and adult education there must be an increasing attempt to understand the influence of geography as a means of explaining *why* things are as they are. But, one must now go beyond this point and attempt to point the way to future good. It is time students start to think of how old industries can be kept from moving away, or think about replacing them with new ones that will fit into the geographic possibilities. It is time for all people to think geographically about questions such as "The United States and Oil in the Near East," the question of economic competition between New England, for instance, and the South or West, or the greatest question of all, the problem of maintaining peace in the world. How can anyone even talk intelligently about such questions without a clear understanding of the geography involved? How many adults, now out of school, really have a clear understanding of the influence that the airplane may have on the world and local community?

There is ample reason to say that geography in the upper levels of education had better begin to look out beyond the local scene as it is or was, to the scene as it probably will be and to ways of using the geographic environment to the best advantage.

Facts Must Be Focused

Gathering and knowing facts is important, but they become valuable only when focused on some specific problem. We have long failed in this because geography stopped where it should have begun! In studying the community thru geography, our first aims

are "understanding the community" thru knowledge of the geographic facts, and "why things are as they are" thru interpretation of these facts in an increasing degree as the grade is higher. All the information gathered, after sorting, may be woven into a definitive report on the community that should be of real value to teachers, pupils and parents. The higher level of aims should add to the definitive report, a section dealing with predictions of things likely to come based on the facts of the report and what ought to be done for the greatest good.

A Challenge to Geographers

Thru adequate geography teaching in the schools, colleges and adult education programs, properly correlated with all other subjects, it is possible to achieve real community vision based on knowledge of the geographic environment. This goal in itself is important, but there is yet another goal, that of using the local community as a spring-board toward understanding other communities and even the world. If we train students in a method, see that they know how to observe, how to analyze and interpret, they can then continue learning new facts and work out interpretation and understanding under any conditions that time and change may bring. Conditions are going to change for science is every day working wonders that affect geography. Moreover, some students in your classes today will be making the laws and doing the international planning, fifteen, twenty, twenty-five years from now when the powers may grow tired of policing the world. Will they be adequately trained in geography and geographic thinking to understand the problem?

It is up to you! The challenge is before you, accept it, and go back to your students with enthusiasm for the power of community vision based on sound geographic thinking!

INTEREST-STIMULATING DEVICE

ASIA—SOME UNUSUAL FEATURES

Name and be able to locate the Asiatic features described below:

1. The highest land in the world ....
2. The lowest dry land in the world ....
3. Place with the world's highest annual rainfall record ....
4. The world's deepest lake; located in Siberia ....
5. A beautiful volcanic mountain sacred to the Japanese ... .
6. A great Indian river, sacred to the Hindus ....
7. Birthplace of the founder of Christianity ....
8. Birthplace of the founder of Mohammedanism ....
9. Supposed site of the Garden of Eden ....
10. A building in India, world-famous for its architectural beauty ....
11. An ancient city which figured prominently in the *Arabian Nights* ....
12. Tht world's longest railway, partly in Asia ....
13. An 1800-mile wall built to keep the Mongols from coming south ....
14. The world's greatest plateau; the "roof of the world" ....
15. One of the world's oldest cities—a great oasis in Syria ... .
16. A great Malay entrepôt city-port, famous for rubber, copra, and tin ....
17. A vast delta plain, covered with a network of irrigation canals, intensively cultivated and densely populated ....
18. Pearl "farms" producing most of the world's pearl output .....
19. An English owned harbor formed by a volcanic crater on the southern coast of Arabia ....
20. A city sacred to Arab, Jew, and Christian; within it is the famous "wailing wall" ....
21. A land in which there are three "Sundays," i.e. three religious rest days, in each week ....
22. A region yielding considerable "fossil ivory" ....
23. One of the world's most productive fishing banks ....
24. Land of the teak and elephant ....
25. One of the world's most famous passes forming a gateway into India from the northwest ....
26. A great river whose destructive floods have earned it the title of "China's Sorrow" ....
27. A famous canal which crosses China's two greatest rivers. It is the world's greatest artificial waterway ....
28. River in whose course are some of the world's greatest irrigation dams built by the English ....
29. The deepest part of the ocean ....
30. A great ocean current which reverses its direction with the change of the monsoon ....
31. One of the world's greatest deserts ....
32. A region of nomadic shepherds; makers of oriental rugs .....
33. A river part of whose channel is below sea level ....
34. An inland sea which is yielding potash salts ....
35. Waters upon which thousands of people live all their lives in boats ....

University of Illinois W. O. Blanchard

EDITORIAL NOTES AND NEWS

The Institute for the Advancement of Visual Education and Vocational Training, Inc., announces that plans are being formulated for a World Geography Series of motion pictures which is to explain and interpret both in the text and picture the human and economic facts about the various countries of the world. When available they are to be distributed to schools in all nations with the text given in the language of the nation under consideration.

Next time you use a cotton shirt, bath towel, or anything made of cotton you might try to visualize some of the machines and operations involved on some of our large cotton plantations. Have you a mental picture of scientific soil preparation and planting, of spraying or dusting insecticides from air planes, of throwing an oil flame under compression along the rows to kill the grass and weeds without harming the cotton plants? Do you grasp the significance of destroying most of the leaves before harvest by chemical defoliation in order to insure a cleaner harvest by a mechanical cotton picker? The latter picks in a day as much cotton as is usually done by sixty hand pickers, but without defoliation the mechanical picker always harvested leaves with the bolls. All these mechanizations lead to cost reduction and that in turn to economic progress. Cost reduction is no doubt a part of the solution to the problem cotton producers face from the serious competition of synthetic fibers and foreign supplies of cotton. The mechanical production is no doubt one answer to the problem if the cotton grower farms a large tract, especially of level land where these mechanized operations are most successful. Growers on small tracts of easily erodible land will probably fare better with greater attention to diversification of crops and livestock. Eventually the cotton growers' problem will be solved, but it may be solved sooner if the public will study this problem from its many aspects and not put too much faith in government price fixing.

The supply of tapioca for food and industrial uses, which was formerly obtained from the Netherlands Indies, has been replaced in part by the starch from a specialized corn known as waxy maize, developed principally by farmers in Iowa working with the United States Department of Agriculture and Iowa State College. The yield has been on a par with other hybrid corn grown on similar soil, but has averaged a higher market price.

OTIS W. FREEMAN was the editor in charge of the January, 1945, number of *Education* which is a special geography number. A wide scope of material is presented in the ten different articles featured in the issue. Half of them deal with problems of education and post-war problems and plans.

Apology: for an unexplainable reason an error appears in two places on page 80 in the February issue of the JOURNAL. Whitehorse is not in Alaska, but is in the Yukon Territory. We hope you will make the correction in your copy of the JOURNAL, as well as in your library's copy. Thank you.

A number of tugboats equipped with Diesel motors developing 200 horsepower are being operated successfully on the Amazon and its tributaries. These tugboats tow cargoes out of all proportion to their size. Included in these cargoes are rubber, minerals, forest products, machinery, and other basic necessities. They are particularly useful above Iquitos and on the stream with headwaters in Peru and Bolivia.

GEOGRAPHICAL PUBLICATIONS

J. Parker Van Zandt. **The Geography of World Air Transport.** 67 pp., maps and diagrams, Brookings Institution, Washington, D.C. 1944. $1.00.

Volume I of *America Faces the Air Age* is written by a noted air expert who comprehends economic and mathematical geography. Future volumes "will consider the relation of civil aviation to the preservation of peace, the organization and regulation of world air transport, subsidies, and related problems."

Most of this book is developed about an analysis of the Principal Hemisphere and its importance to developing future air routes; this hemisphere contains the maximum amount of land. The center for the hemispherical azimuthal equidistant map is southeast of Nantes, France; this center was calculated by A. Penck in 1899. This type of projection was used to aid the reader in developing correct impressions of what the earth would look like from this central point. The author attempts to correct wrong impressions which he realizes the average person has about the appearance of the earth.

The author takes issue with geographers who have expressed the belief that future air routes will not vary greatly from the old sea lanes. He believes that future air routes will develop after considering: potential traffic, between terminals and along the route; availability of adequate airports, airway aids, and facilities; longest unavoidable nonstop flight; length of route; and flying weather. The political factor is not considered. He presents adequate information to substantiate his view that "air routes of the future are not likely to be laid out across the north polar region; few, if any, major routes will go as far north as the Arctic Circle."

The entire world is divided into eight major trade regions. They are: Greater Europe, North America, Union of Socialistic Soviet Republics, Asia, Africa, Middle America, South America, and Oceania. The last trade area is not in the Principal Hemisphere; the first four dominate the world in trade, large cities, manufacturing, etc. The advantage that European nations have in the land hemisphere is locational, but North Americans have surplus wealth to trade with and travel to this nucleus. The author closes his last chapter by saying, "The hard facts of geography are still the bedrock on which to build soundly for the Air Age."

This volume is written for college and high school students. Abundant use of maps, statistical tables, and graphs make the volume easy to read and understand. The appendices furnish additional material for those who wish to have more statistics and supplementary information than is presented in the three chapters.

LEROY O. MYERS

The Pennsylvania State College
State College, Pennsylvania

Edward F. Castetter and Willis H. Bell. **Pima and Papago Indian Agriculture.** Inter-American Studies 1. 245 pp. The University of New Mexico Press, Albuquerque, N.M. 1942. $3.50

This is the first of a series of research studies promoted by the new School of Inter-American Affairs of the University of New Mexico. The series aims to deal with topics designed to promote a better understanding of the problems of Hispanic cultural groups in areas where Anglo-Saxon culture predominates. Such studies dealing with cultures within and outside our borders should promote better cultural relations between the Americas. The research back of this study aimed to reconstruct the pattern of aboriginal society developed by the Pima and Papago tribes. These Indians were and still are irregularly distributed from southern Sonora to the Gila River. The emphasis is on their agriculture, the descriptions of which are based on field studies and documentary

evidence. As might be expected, those Indians who had the most frequent contacts with the white man reflect the most changes in their culture today. This is apparent in the Pima Indians who lived in the valley of the Gila River to which came beaver trappers, U. S. military expeditions, those joining the gold rush to California, and those making surveys for the Gadsden Purchase. Many old agricultural practices are still unchanged among the Papago Indians in the isolated centers of southern Arizona. Especially interesting is the concluding chapter dealing with the ceremonials attending the growing of tobacco and its uses.

C. P. S.

Grace Croyle Hankins. **Our Global World—a Brief Geography for the Air Age.** Gregg Publishing Co. 1944. $1.32

As the sub-title states this is a brief geography. And brief, indeed, it is having a total of eighty-nine pages. Fourteen of these are each taken up with a single full-page picture. Aside from the pages of Tables, Quiz Questions, and Reading Lists only about twenty pages contain one-half or more of textual material. Illustrations are very much to be desired but it is to be regretted that many of those used in this text are of low geographic value.

Eight topics are discussed in this book. The first of which is "This Global World." It gives a brief treatment of the development and use of the airplane.

The second topic "Maps and How to Read Them" is a very important and timely one. I regret to state that a number of errors have crept into this treatment both in illustration and statement.

In discussing the "Topography of Our Global World" a picture showing cloud shadows on page twenty-five is referred to thus "You can see this (water vapor rising) happening in the picture below." On page twenty-seven there is a mis-statement concerning the effect of an ocean current. Other mistakes besides these two could be mentioned.

Twelve pages are devoted to the topic: The Natural Regions of Our Global World. One page is used entirely to show a picture of Brooklyn Bridge and another carries a full page picture of New York as a harbor city.

The Climate and Weather of Our Global World is dismissed after using twelve pages. I regret to state that the errors in this very important subject are so numerous that I cannot attempt to list them.

Other subjects included in this book are: Natural Resources, Population, and Economic Development.

A reading list is a fine feature of a textbook, but the one in this book seems to contain titles of a number of books not well suited to the subjects or far beyond the appreciation of senior high school students.

ANNA C. LARSON

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Glenn T. Trewartha. **An Introduction to Weather and Climate,** Second Edition. 545 pages, maps, diagrams, appendices, index, references. McGraw-Hill Book Company. 1943. $4.00

This book is a revision of the earlier edition (reviewed in the JOURNAL, March 1944) and in outward appearance is almost identical to it, yet the new edition contains 50% more material. This is made possible by use of a thinner and higher grade paper. Part I, *The Elements of Weather and Climate,* is composed of five chapters. Chapter four, a 47 page discussion of "Air Masses and Fronts" has been added and brings the discussion of the rapidly growing knowledge of this phase of weather controls up to

date. The four other chapters have been considerably expanded. Part II, *Climatic Types and Their Distribution*, comprises a little less than half the book. The chapters on Microthermal and Polar Climates are the only ones that have not been appreciably amplified over those of the first edition. The addition of about 90 figures and maps, and the substitution of some new ones, thruout the book have added much to its value as a text for elementary students. It is to be hoped that Part III, *A Regional Analysis of the Climates of the Individual Continents*, which was originally to have been a part of this book, may soon be added. This text is one that should have a place in the library of each college teacher of geography as well as of those teaching only in the field of weather and climate.

J. E. SWITZER

Indiana University

Paul R. Olson and Charles Addison Hickman. **Pan American Economics,** 479 pages; 30 maps, graphs and charts; 38 tables in appendix; extensive bibliography; John Wiley and Sons.

Pan American Economics focuses attention on the international aspects of the Latin American economy, with special emphasis on the relationships between the United States and Latin America. It has an abundance of data useful to the geographer, especially to the student and teacher of economic geography. Many of the economic facts given in the thirty-eight tables of the Appendix are tellingly illustrated in unique maps, charts, and graphs well placed with reference to the text material. The statistics and graphic illustrations reflect interrelations between the economic life of the people and the environmental complex, not only within Latin America but also in other parts of the commercial world.

The first three chapters deal with the role of foreign trade in Latin America, including the composition and distribution of commodities; five chapters are given to foreign capital and investments; tariff policies and trade take five chapters; and the last two chapters have for their titles Pan American Cooperation, and Future World Role of Pan America.

From the geographic viewpoint of the reviewer, this book reveals the fact that to become acquainted with the problems of our neighbors and to comprehend the difficulties in promoting mutual advance in social and political phases of life, we need a better understanding of the actual and the potential economics of various parts of the world community. The book challenges the geographer to make more clear the part which the items of the natural environment have played in the economic life of Latin America at present, and what they have to do with the possibilities of the future.

Pan American Economics should be available to all students and teachers of general economic geography and especially of regional geography of Latin America. Its interpretation should fortify the statement that geography roots in the earth sciences and blossoms in social science.

H. HARRISON RUSSELL

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War Map—The Pacific Theater. Esso War-Time Travel Service, 30 Rockefeller Plaza, New York 20, or 261 Constitution Ave. N.W., Washington, D.C., or P. O. Box 1250, New Orleans 10, La., or any Esso dealer. Free.

One side shows east Asia and Japan, and the other side China, southeast Asia, East Indies, and Pacific islands. There are numerous inserts showing limited areas on a scale

larger than the general map. This is a remarkably fine map produced for advertising purposes. The publishers deserve commendation. It can be used effectively in the classroom.

Floyd A. Stilgenbauer and Spencer A. Larson. **Certificated Airline Map of the World.** Wayne University Press, Detroit, Mich. **$1.25.**

This map portrays the data compiled by long research extended to all parts of the world. The projection is a new one—Polar Lobate Globoid. The four corners of the sheet have been utilized to give many air-line distances. Schools will find this new map highly useful.

Elaine Forsyth. **Map Reading,** Geographic Education Series. 64 pp., 80 diagrams, 50 test questions. McKnight and McKnight, Bloomington, Illinois. 1944. **$0.60**

The booklet on Map Reading supplies the teacher with simple, workable lessons on the fundamental concepts of map reading. For the pupils of junior-senior high school levels, the booklet amplifies and verifies previous learnings into a coordinated unit.

Map Reading includes eight lessons and a test lesson of fifty objective items on the skill in interpretation and the understanding of map facts. In the Introduction the author clearly delimits the scope of the booklet to "scale and recognition of projection" which are "fundamental to all map reading" and "taught less adequately than symbols." The author has skilfully kept within the lines indicated.

The first lessons develop, step by step, the necessary frame-work—latitude and longitude—of a map. Other lessons develop scale and projections. The devices described are really teachable. Suggestions are given in the Introduction and in the lessons of ways to develop concepts on map reading and understanding of maps. Pupils need actually to do the exercises incorporated into the text to be able to follow thru the next step. Within the body of or at the end of each lesson is a summary of "Things to remember."

If the reader of the booklet is quite familiar with maps, he will want to read this publication to see how well he has taught this same material and to collect more ideas for better teaching procedures. If the reader is not familiar with maps and has experienced difficulty in understanding as well as in teaching map projections, he will not want to set the booklet aside until he has surveyed the entire set of lessons.

M. MELVINA SVEC

State Teachers College at
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Holt, Etelka, and Cutler, Mildred B., **Sunlight and Earth,** mimeographed, State Teachers College, Pittsburg, Kansas, 1944.

Sunlight and Earth is a series of exercises designed to assist students in understanding latitude, longitude, sun position, circulation of the atmosphere, and ocean currents. Sun Behavior is presented concisely step by step with specific diagrams and application exercises. A student working thru these exercises should acquire the ability to think in terms of sun position in almost any region north or south of the equator at any season. He should also gain facility in applying the principles underlying the circulation of the atmosphere.

The diagrams are unusually clear considering the fact that they are mimeographed.

This little exercise book should be of interest to teachers of freshman college course in Fundamentals, and of aviation geography.

ZOE A. THRALLS

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